AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning on page 11, line 14, as follows:

(Currently Amended) The temperature control of the device may include individual temperature control of: the grid generator 246, the base 260, and the gain medium 224. The channel tuner and the grid control include logic ~~254C, 248C~~ 254L,248L, respectively, for tuning the channel selector 252 and for maintaining the reference characteristics of the grid generator 246 respectively. These modules may be implemented separately or in combination. They may be implemented with open or closed loop feedback of temperature, wavelength, position etc. A single processor with appropriate program code and lookup table(s) may be used to control both the channel tuner and grid control. In an embodiment of the invention the lookup table contains data or formula which correlate wavelength of either/both the channel selector 252 or the grid generator 246 with the control variable(s). In the above discussed embodiment the control variable is temperature. In alternate embodiments of the invention the control variable(s) include: position, rotation, temperature, electrical parameters, electro-optic parameters etc. The lookup table(s) may contain a formula or a plurality of records which correlate the pass band characteristics of either or both the channel selector and the grid generator with a specific control variable, e.g. tuning parameter, appropriate for the manner in which selector / generator is being tuned/regulated. Tuning/regulation may be accomplished by mechanical, electrical or opto-electrical tuning device. Mechanical parameters include positions of the channel selector, (See FIG. 3A).

Please amend the paragraph beginning on page 23, line 3, as follows:

(Currently Amended) FIG. 9 is a block diagram of an alternate embodiment of the vernier tuned filter as part of a wavelength locker. A optical beam source 900 is shown emitting an output beam 904. That beam may include a number of channels each centered on a corresponding gridline of a selected wavelength grid. That beam passes through a beam splitter 910 to generate an output beam 906 and a reference beam 908. The reference beam passes through a first photodetector 920 and a second photodetector 922. Between the first and second photodetectors is positioned the vernier tuned filter generally 290. That filter is tuned in the above discussed manner to a selected wavelength at which to measure one or more of the input wavelengths of the beam. The drift of the output wavelength of the

laser is measured at the second photodetector. Differencer 924 accepts as inputs the signal provided by the photodetectors 920-922. The photodetectors in combination with the differencer comprise an error detector to detect a difference in energy levels of the beam at the input and output of the vernier tuned filter and to provide an output in the form of an error signal. The error signal, may be subject to amplification in amplifier 926 and is supplied to the laser 900 and to logic ~~900C~~ 900L therein for adjusting a wavelength control parameter of the laser, e.g. drive current. In an embodiment of the invention, where the control parameter is current, the output of the amplifier may be coupled to logic which includes a summer which sums the error signal and a laser drive signal to drive the laser.

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